

MAY (F3 ) HOP

TECH CENTER 1600 2900



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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/234,733A

DATE: 05/01/2002

TIME: 13:06:29

Input Set : A:\seqlist.txt

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3 <110 · APPLICANT: JIANG, Min
 .1
     POTTER, Andrew A.
        MACLACHLAN, Philip R.
 ^{7} < 120 \times TITLE OF INVENTION: CAMP FACTOR OF STREPTOCOCCUS UBERIS
 9 - 130 - FILE REFERENCE: 9000-0030.10
11 (14) - CURRENT APPLICATION NUMBER: 09/234,733A
12 4141 CURRENT FILING DATE: 1999-01-21
14 - 160 NUMBER OF SEQ ID NOS: 5
16 -: 170 SOFTWARE: PatentIn Ver. 2.0
18 - 210 > SEQ ID NO: 1
19 - 211> LENGTH: 1191
20 + 212 > TYPE: DNA
21 3213> OFGANISM: Artificial Sequence
23 - 220 FEATURE:
24 <223> OTHER INFORMATION: Description of Artificial Sequence: S. uberis CAMP
25 factor gene
27 - 2200 FEATURE:
28 + 2215 NAME/KEY: CDS
29 - (222) LOCATION: (157)..(924)
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34 ttaaaaaaat tgttactgta tgatacaggc ataagtactt atttatttta tagattgcaa 120
36 titataaaca attatattii toaaagagga atgott atg gaa tio aaa aag tia
                                            Met Glu Phe Lys Lys Leu
37
38
                                              1
40\, ctf tat fta act ggt tida afd gda gga att acf fta fff for dda att.
4) Leu Tyr Leu Thr Gly Ser Ile Ala Gly Ile Thr Leu Phe Ser Pro Ile
               1 ()
                                    15
44 tha aca agh gho caa goa aat caa aha aat ghh agh caa coa for aat
45 Ieu Thr Ser Val Gln Ala Asn Gln Ile Asn Val Ser Gln Pro Ser Asn
46 25
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                                                    35
48 aat gaa agt aat gtt att toa oag aaa aaa gaa gaa att gat aat agt
                                                                       318
49 Asn Glu Ser Asn Val Ile Ser Gln Lys Lys Glu Glu Ile Asp Asn Ser
      40
                            45
52 cta aat dag gaa agt got daa cta tat goo ttg aaa gaa gat giit aaa
                                                                       366
53 Leu Ash Gli Glu Ser Ala Gli Leu Tyr Ala Leu Lys Glu Asp Val Lys
5.4 55
                       6.0
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RAW SEQUENCE LISTING

DATE: 05/01/2002 PATENT APPLICATION: US/09/234,733A TIME: 13:06:29

Input Set : A:\seqlist.txt

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-69 Ile -70		he Ser	Thr	Gln		Leu	Thr	Asn	Lys		Asp	GIn	Ala	His	
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	-	et Gly									_			_	0(11)
74 135				140			,2		145					150	
in cca	ttt g	ct tca	aat	g.aa	tcc	a t.t.	aaa	ggg	caa	gtc	gaa	gct	gtt	aaa	654
77 Pro	Phe A	la Ser		GLu	Ser	Ile	Lys	_	Gln	Val	Glu	Ala		Lys	
			155					160					165		
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85 Arg															, , , , ,
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84 Thr	_	le Thr	Arg	Азр		Lys	Val	Leu	Asn		Lys	ser	Phe	Glu	
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92 gtt						_,				_	_				84 h
93 Val 94 215	туг н	IS GIN	Leu	220	Lys	Ala	rre	inr	225	Ата	vaı	GIY	val	230	
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97 Leu					-	-		-	-		-				• , .
98			235					240	-				245		
100 cta	a caa (	gaa gc	a tta	a aat	act	get	cta	a cag	j taa	aggta	agag	atto	gaatt	.ga	944
101 Let	ı Gln (			ı Asr	n Thi	Ala			1						
102		250					255								1.6.0.4
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108 cti	-		-					-							
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122		eprot.e:									, 1 4 1				
124 < 40	)0> SE(	QUENCE	: 2												
125 Met	Glu I	Phe Lys	s Lys	Lei	ı Lei	ı Tyr	Les	Thi	~ G15	Ser	· 116	Ala	-		
126			٦					10					1 -		
128 Thi	i Leu I	Phe Sei	r Pro	) Ile	1.64	i Thi	Set	- Val	G11	ı Ala	L ASI	r Gli	11.	> Asn	

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134 135	Glu	Glu 50	He	Asp	Asn	Ser	Leu 55	Asn	Gln	Glu	Ser	Ala 60	Gln	Leu	Tyr	Ala
	Leu	Lys	Glu	Asp	Val	Lys		Thr	Glu	Lys	Glu		Ser	Val	Asn	Ser
	5	•				70	•			1	7.5					80
140	Ala	116	Ser	Ala	Val	Glu	Asn	Leu	Lys	Thr	ser	Leu	Arq	Ala	Asn	bro
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144	Gill	Ihr	116	19 <b>r</b>		Leu	Asn	ser	11e	GIY	Inr	Arg	Val	110	Ala	116
	ser	Asp	Val			Ala	Ile	Val		Ser	Thr	Gln	Gln		Thr	Asn
147		•	115					120					125			
		Val				His		Asp	Met	Gly	Phe		He	Thr	Lys	Leu
150		130		<b>r1</b>			135	pl		.~ .		140		<b>71</b> .	•	al
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		Val.	Glu	Ala	Val		Gln	Val	Gln	Ala		Val	Leu	Thr	Tvr	
15n					165	_				170					175	
		Leu	Gln								Tyr	Val	Lys		Lys	Leu
159		T	f au	180		.31.5			185		2	2	(2.1 ···	190	17-1	Torus
$\frac{101}{162}$	Asp	Lys	195	TTE	1114)	اللت	Inr	200	ire	Inr	Arg	ASP	205	Lys	vaı	Leu
	Asn	Val		Ser	Phe	Glu	Val		His	Gln	Leu	Asn		Ala	Ile	Thr
165		210	1				215	•				220	1			
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	225	.11.	.21	t 1 a	T	230	T	G1	a1	3 l -	235		m l	» l	T	240
171	ASP	Gln	l.a 1. l.I	rre	245	Val	rea	GIII	GLU	250	Leu	ASII	1111	Ald	255	GIII
	·:210	): SI	EQ II	NO:						230					233	
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181		CF						, , , , , ,						1		
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188	1 111	, , , , ,	I He.	20	r 1 117	1 16.	1 * * 11	1 1111	215	V (1 1	(1111	25 1 (1	212011	31)	1.14.	420
190	Val	Ser	Gln	Pro	Ser	Asn	Asn	G] u	Ser	Asn	val	116	Sei	Gln	Lys	Lys
191			35					4.0					4.5			
	Glu	Glu	He	Asp	Asn	Ser		Asn	Gln	Glu	Ser		Gln	L€u	Туг	Ala
$\frac{194}{196}$	Len	50 Lys	Glu	Aer.	Val	Tue	55 G1v	Thr	Glu	Luc	Glo	60 Gln	Sor	Val	Δen	Sor
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199	Ala	He	501	Ala	Val	Glu	Asn	Len	Lys	Thr	Seri	[++1]	in i i	Ala	Asu	Pto
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	Leu			Tle	Ala	Asn			Δla	Ser	Asn		Ser	He	Lvs	G12	
	145	110		11.	mia	150		1 110	nia	DCI	155	014	00.1	110	Lys	160	
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	Gln	vai	GIU	Ala		Lys	GIn	va 1	GIn		Inr	Val	Leu	Inr		Pro	
215					165					170					175		
.:17	Asp	Leu	Gln	Pro	Thr	Asp	Arg	Ala	Thr	Ile	Tyr	Va l	Lys	Ser	Lys	Leu	
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221		1	195		•			200					205	-			
	Asn	Val		Ser	Phe	Glu	Va l		His	Cln	Len	Δen		Ala	Tle	Thr	
001	71511	!10		501	THE	514	215	1 9 1	11 1 1,5	CILII	ьси	220	Lys	nia	IIC	1111	
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	His	Ala	val	13 T.Ž.	vaı		Leu	Asn	Pro	rnr		Inr	val	Ата	GIn		
227	225					230					235					240	
229	Asp	Gln	Glu	Il⊕	Lys	Val	Leu	Gln	Glu	Ala	Leu	Asn	Thr	Ala	Leu	Gln	
230					245					250					255		
238	-:210	) · SI	EQ II	ON C	: 4												
	<211																
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242	+:223	3 - 01	THER	INF	DRMA:	LION	: Des	scrip	ption	ı of	Arti	ifici	ial S	Seque	ence	: S.	agalactia
243		CP	AMP 1	facto	or pi	rotei	in										
245	-:40	) SI	EQUEI	ICE:	4												
245		) SI	EQUEI	ICE:	4			Val	Val	Asn	His	Val	Asn	Ser	Asn	Asn	
245	-:40	) SI	EQUEI	ICE:	4			Val	Val	Asn 10	His	Val	Asn	Ser	Asn 15	Asn	
245 246 247	-:400 Asp 1	) ∕SI Gln	EQUEN Val	NCE: Thr	4 Thr 5	Pro	Gln			10					15		
245 246 247 249	-:400 Asp	) ∕SI Gln	EQUEN Val	NCE: Thr Gln	4 Thr 5	Pro	Gln		Leu	10				Ile	15		
245 246 247 249 250	Asp 1 Gln	)∵ SI Gln Ala	EQUEN Val Gln	Thr Gln 20	4 Thr 5 Met	Pro Ala	Gln Gln	Lys	Leu 25	10 Asp	Gln	Asp	Ser	Ile 30	15 Gln	Leu	
245 246 247 249 250 252	-:400 Asp 1	)∵ SI Gln Ala	EQUEN Val Gln Ile	Thr Gln 20	4 Thr 5 Met	Pro Ala	Gln Gln	Lys Gln	Leu 25	10 Asp	Gln	Asp	Ser Glu	Ile 30	15 Gln	Leu	
245 246 247 249 250 252 253	Asp 1 Gln Arg	Gln Gln Ala Asn	EQUEN Val Gln Ile 35	Gln 20 Lys	4 Thr 5 Met Asp	Pro Ala Asn	Gln Gln Val	Lys Gln 40	Leu 25 Gly	10 Asp Thr	Gln Asp	Asp Tyr	Ser Glu 45	Ile 30 Lys	15 Gln Pro	Leu Val	
245 246 247 249 250 252 253	Asp 1 Gln	Gln Gln Ala Asn Glu	EQUEN Val Gln Ile 35	Gln 20 Lys	4 Thr 5 Met Asp	Pro Ala Asn	Gln Gln Val	Lys Gln 40	Leu 25 Gly	10 Asp Thr	Gln Asp	Asp Tyr Thr	Ser Glu 45	Ile 30 Lys	15 Gln Pro	Leu Val	
245 246 247 249 250 252 253	Asp 1 Gln Arg	Gln Gln Ala Asn	EQUEN Val Gln Ile 35	Gln 20 Lys	4 Thr 5 Met Asp	Pro Ala Asn	Gln Gln Val	Lys Gln 40	Leu 25 Gly	10 Asp Thr	Gln Asp	Asp Tyr	Ser Glu 45	Ile 30 Lys	15 Gln Pro	Leu Val	
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245 246 247 249 250 252 253 256	Asp 1 Gln Arg Asn	Glu 50	EQUEN Val Gln Ile 35 Ala	Thr Gln 20 Lys	4 Thr 5 Met Asp	Pro Ala Asn Ser	Gln Gln Val Val	Lys Gln 40 Glu	Leu 25 Gly Lys	10 Asp Thr Leu	Gln Asp Lys	Asp Tyr Thr 60	Ser Glu 45 Ser	Ile 30 Lys Leu	15 Gln Pro Arg	Leu Val Ala	
245 246 247 249 250 253 255 256 258 259	Asp 1 Gln Arg Asn Asn	Gln Ala Asn Glu 50 Ser	EQUEN Val Gln Ile 35 Ala Glu	Thr Gln 20 Lys Tle	Thr 5 Met Asp Thr	Pro Ala Asn Ser Tyr	Gln Gln Val Val 55 Asp	Lys Gln 40 Glu Leu	Leu 25 Gly Lys Asn	10 Asp Thr Leu Ser	Gln Asp Lys Ile	Asp Tyr Thr 60 Gly	Ser Glu 45 Ser Ser	Ile 30 Lys Leu Arg	15 Gln Pro Arg Val	Leu Val Ala Glu 80	
245 246 247 249 250 253 253 256 258 269 261	Asp 1 Gln Arg Asn	Gln Ala Asn Glu 50 Ser	EQUEN Val Gln Ile 35 Ala Glu	Thr Gln 20 Lys Tle	1 Thr 5 Met Asp Thr Val	Pro Ala Asn Ser Tyr	Gln Gln Val Val 55 Asp	Lys Gln 40 Glu Leu	Leu 25 Gly Lys Asn	10 Asp Thr Leu Ser	Gln Asp Lys Ile	Asp Tyr Thr 60 Gly	Ser Glu 45 Ser Ser	Ile 30 Lys Leu Arg	15 Gln Pro Arg Val	Leu Val Ala Glu 80	
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245 246 247 249 250 253 255 256 258 261 262 264	Asp 1 Gln Arg Asn Asn	Glu Ser	EQUEN Val Gln Ile 35 Ala Glu Ihr	Thr Gln 20 Lys Tle Thr Asp Val	Thr 5 Met Asp Thr Val	Pro Ala Asn Ser Tyr 70	Gin Gln Val Val 55 Asp Glu	Lys Gln 40 Glu Leu	Leu 25 Gly Lys Asn 110	10 Asp Thr Leu Ser	Gln Asp Lys Ile 75 Pho	Asp Tyr Thr 60 Gly Ser	Ser Glu 45 Ser Ser	Ile 30 Lys Leu Arg Gln	15 Gln Pro Arg Val	Leu Val Ala Glu 80 Leu	
245 246 247 249 250 253 253 256 258 259 261 264 265	Asp 1 Gln Arg Asn 65 A a	Ala Asn Glu 50 Ser Lou Asn	EQUENT Value of the State of th	MCE: Thr Gln 20 Lys Tle Thr Asp Val	4 Thr 5 Met Asp Thr Val Val 85 Sor	Pro Ala Asn Ser Tyr 70 Ile	Gin Gln Val Val 55 Asp Glu Ala	Lys Gln 40 Glu Leu Ala Ast	Leu 25 Gly Lys Asn 110 110 105	10 Asp Thr Leu Ser Thr GG Asp	Gln Asp Lys Ile 75 Pho Met	Asp Tyr Thr 60 Gly Ser	Ser Glu 45 Ser Ser Thr	Ile 30 Lys Leu Arg Gln	15 Gln Pro Arg Val His 95 Ile	Leu Val Ala Glu 80 Leu	
245 246 247 249 250 253 253 256 258 259 261 264 265	Asp 1 Gln Arg Asn Asn 65 A a	Ala Asn Glu 50 Ser Lou Asn	EQUEN Val Gln Ile 35 Ala Glu Thr 178 Val	MCE: Thr Gln 20 Lys Tle Thr Asp Val	4 Thr 5 Met Asp Thr Val Val 85 Sor	Pro Ala Asn Ser Tyr 70 Ile	Gin Gln Val Val 55 Asp Glu Ala	Lys Gln 40 Glu Leu Ala Ast	Leu 25 Gly Lys Asn 110 110 105	10 Asp Thr Leu Ser Thr GG Asp	Gln Asp Lys Ile 75 Pho Met	Asp Tyr Thr 60 Gly Ser	Ser Glu 45 Ser Ser Thr	Ile 30 Lys Leu Arg Gln	15 Gln Pro Arg Val His 95 Ile	Leu Val Ala Glu 80 Leu	
245 246 247 249 250 253 253 256 258 259 261 264 265	Asp 1 Gln Arg Asn 65 A a	Ala Asn Glu 50 Ser Lou Asn	EQUENT Value of the State of th	MCE: Thr Gln 20 Lys Tle Thr Asp Val	4 Thr 5 Met Asp Thr Val Val 85 Sor	Pro Ala Asn Ser Tyr 70 Ile	Gin Gln Val Val 55 Asp Glu Ala	Lys Gln 40 Glu Leu Ala Ast	Leu 25 Gly Lys Asn 110 110 105	10 Asp Thr Leu Ser Thr GG Asp	Gln Asp Lys Ile 75 Pho Met	Asp Tyr Thr 60 Gly Ser	Ser Glu 45 Ser Ser Thr	Ile 30 Lys Leu Arg Gln	15 Gln Pro Arg Val His 95 Ile	Leu Val Ala Glu 80 Leu	
245 246 247 249 250 253 255 256 258 261 264 267 268	Asp 1 Gln Arg Asn Asn 65 A a	Glu  Glu  50  Ser  Leu  Leu	EQUEN Val Gln Ile 35 Ala Glu Thr 178 Val 115	MCE: Thr Gln 20 Lys Tle Thr Asp Val 100 Ile	4 Thr 5 Met Asp Thr Val Val 85 Ser Arg	Pro Ala Asn Ser Tyr 70 Ile Gln Ile	Gin Gln Val Val 55 Asp Glu Ala Leu	Lys Gln 40 Glu Leu Ala Ast: Asp 120	Leu 25 Gly Lys Asn Ile 105 Pro	10 Asp Thr Leu Ser Thr 90 Asp	Gln Asp Lys Ile 75 Pho Mot Ala	Asp Tyr Thr 60 Gly Ser Gl:	Ser Glu 45 Ser Ser Thr Pho Val 125	Ile 30 Lys Leu Arg Gln Gly 110 Asp	15 Gln Pro Arg Val His 95 Ile Ser	Leu Val Ala Glu 80 Leu Thr	
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245 246 247 249 250 253 255 256 261 262 264 265 267 268 270 271	Asp 1 Gln Arg Asn Asn 65 A a Lys	Asn Glu 50 Ser Len Asn Leu Ala 130	EQUEN Val Gln Ile 35 Ala Glu Ihr 178 Val 115 Gln	MCE: Thr Gln 20 Lys Ile Thr Asp Val 100 Ile Val	Thr 5 Met Asp Thr Val 85 Ser Arg Asn	Pro Ala Asn Ser Tyr 70 Ile Gln Ile Asp	Gin Gin Val Val 55 Asp Glu Ala Leu Val 135	Lys Gln 40 Glu Leu Ala Ash Asp 120 Lys	Leu 25 Gly Lys Asn Ile 105 Pro	10 Asp Thr Leu Ser Thr 90 Asp Phe Leu	Gln Asp Lys Ile 75 Phe Met Ala Glu	Asp Tyr Thr 60 Gly Ser Gln 140	Ser Glu 45 Ser Ser Thr Pho Val 125 Lys	Ile 30 Lys Leu Arg Gln Gln 110 Asp	15 Gln Pro Arg Val His 95 The Ser Leu	Leu Val Ala Glu 80 Leu Thr	
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245 246 247 249 250 253 255 256 258 261 264 265 267 268 270 273 274	Asp 1 Gln Arg Asn Asn 65 A a Lys	Ala Asn Glu 50 Ser Leu Ala 130 Pro	EQUEN Val Gln Ile 35 Ala Glu Ihr 178 Val 115 Gln Asp	MCE: Thr Gln 20 Lys tle Thr Asp Val 100 Ile Val	Thr 5 Met Asp Thr Val 85 Set Arg Asn Lys	Pro Ala Asn Ser Tyr 70 Ile Gln Ile Asp Pro 150	Gin Gin Val Val 55 Asp Glu Ala Leu Val 135 Thr	Lys Gln 40 Glu Leu Ala Asn Asp 120 Lys Asp	Leu 25 Gly Lys Asn Ile 105 Pro	10 Asp Thr Leu Ser Thr 90 Asp Phe Leu Ala	Gln Asp Lys Ile 75 Pho Met Ala Glu Thr 155	Asp Tyr Thr 60 Gly Ser Gln 140 11e	Ser Glu 45 Ser Ser Thr Pho Val 125 Lys	Ile 30 Lys Leu Arg Gln Gly 110 Asp Val	15 Gln Pro Arg Val His 95 The Ser Leu	Leu Val Ala Glu 80 Leu Thr The Thr	

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344 Thr Ala Leu Gln

345 225

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/234,733A

DATE: 05/01/2002 TIME: 13:06:31

Input Set : A:\seqlist.txt